AMENDMENT TO THE CLAIMS

1 (Currently Amended): An implantable prosthesis comprising:

at least one occluder, wherein the at least one occluder comprises a rigid material with pores formed in the rigid material, wherein the rigid material is selected from the group consisting of metals, carbonaceous solids, polymers, and ceramics; and

wherein a filler comprising a hydrogel or a structural protein or a bioactive agent or mixtures thereof, is the filler being located within the pores, wherein said rigid porous material with the filler presents a smoother surface for fluid flow than pores without filler.

2 (Original): The implantable prosthesis of claim 1 wherein the filler fills the pores.

3 (Original): The implantable prosthesis of claim 2 wherein the rigid porous material with the filler presents a smooth surface to flow.

4 (Original): The implantable prosthesis of claim 1 wherein the filler partly fills the pores.

5 (Original): The implantable prosthesis of claim 1 wherein the filler comprises a hydrogel selected from the group consisting of poly(ethylene glycol), poly(hydroxyethyl methacrylate), partially or fully hydrolyzed poly(vinyl alcohol), poly(vinylpyrrolidone), poly(ethyloxazoline), poly(ethylene oxide)-co-poly(propylene oxide) block copolymers, polyamines, polyacrylamide, hydroxypropylmethacrylate, carboxymethyl cellulose, hydroxyethyl cellulose, methylhydroxypropyl cellulose, polysucrose, hyaluronic acid, alginate, chitosan, dextran, gelatin and mixtures and copolymers thereof.

6 (Original): The implantable prosthesis of claim 1 wherein the filler comprises a structural protein.

7 (Original): The implantable prosthesis of claim 6 wherein the structural protein is an extracellular matrix protein.

8 (Original): The implantable prosthesis of claim 1 wherein the filler comprises a mixture of hydrogel and structural protein.

9 (Original): The implantable prosthesis of claim 1 wherein the filler comprises a biologically active agent.

10 (Original): The implantable prosthesis of claim 9 wherein the biologically active agent is dispersed within the hydrogel or protein.

11 (Original): The implantable prosthesis of claim 9 wherein the biologically active agent is selected from the group consisting of a growth factor, a cell attraction compound, an anticoagulant and combinations thereof.

12 (Original): The implantable prosthesis of claim 9 wherein the biologically active agent is VEGF.

13 (Original): The implantable prosthesis of claim 9 wherein the bioactive agent is a growth factor.

14 (Original): The implantable prosthesis of claim 9 wherein the bioactive agent is a progenitor attraction compound.

15 (Original): The implantable prosthesis of claim 9 wherein the bioactive agent is an anticoagulant.

16 (Original): The implantable prosthesis of claim 1 wherein the pores extend through the rigid material.

17 (Original): The implantable prosthesis of claim 1 wherein the pores have an interconnecting porosity.

18 (Original): The implantable prosthesis of claim 1 wherein a nutrient is also located within the pores.

19 (Original): The implantable prosthesis of claim 1 further comprising viable cells.

20-21 Canceled.

22 (Previously Presented): The implantable prosthesis of claim 1 wherein the prosthesis is a mechanical heart valve prosthesis comprising an orifice ring and the at least one occluder attached to the orifice ring.

23-39 Canceled

40 (Currently Amended): An implantable medical device comprising:

at least one occluder, wherein the at least one occluder comprises a rigid material having pores formed in the rigid material and present substantially close to a surface of the rigid material, wherein the rigid material is selected from the group consisting of metals, carbonaceous solids, polymers, and ceramics~~,~~; and

a filler, ~~wherein~~ said filler comprising a hydrogel or a structural protein or a bioactive agent or mixtures thereof, ~~is~~ the filler being located within the pores to promote cellular attachment and proliferation.

41 (Previously Presented): The medical device of claim 40 wherein said device is for contacting bodily fluids and/or tissue after implantation.

42 (Previously Presented): The medical device of claim 40 wherein said filler fills the pores.

43 (Previously Presented): The medical device of claim 42 wherein said rigid porous material with the filler presents a smooth surface to flow.

44 (Previously Presented): The medical device of claim 40 wherein said bioactive agent is dispersed within the hydrogel or protein.

45 (Previously Presented): The medical device of claim 40 wherein the bioactive agent is selected from the group consisting of a growth factor, a cell attraction compound, an anticoagulant and combinations thereof.

46 (Previously Presented): The medical device of claim 40 wherein the bioactive agent is VEGF.

47 (Previously Presented): The medical device of claim 40 wherein the bioactive agent is a progenitor attraction compound.

48 (Previously Presented): The medical device of claim 40 wherein the bioactive agent is an anticoagulant.

49 (Currently Amended): An implantable medical device comprising:

at least one occluder, wherein the at least one occluder comprises a rigid material having pores substantially extending through the rigid material to form a porous network, wherein the rigid material is selected from the group consisting of metals;

carbonaceous solids, polymers, and ceramics~~,~~; and

a filler, ~~wherein~~ said filler comprising a hydrogel or a structural protein or a bioactive agent or mixtures thereof, ~~is~~ the filler being located within the pores, and said porous network does not provide significant blood flow through the porous material.

50 (Previously Presented): The medical device of claim 49 wherein said porous network promotes cellular attachment and proliferation.

51 (Previously Presented): The medical device of claim 49 wherein said filler fills the pores.

52 (Previously Presented): The medical device of claim 51 wherein said rigid porous material with the filler presents a smooth surface to flow.

53 (Previously Presented): The medical device of claim 49 wherein said bioactive agent is dispersed within the hydrogel or protein.

54 (Previously Presented): The medical device of claim 49 wherein the bioactive agent is selected from the group consisting of a growth factor, a cell attraction compound, an anticoagulant and combinations thereof.

55 (Previously Presented): The medical device of claim 49 wherein the bioactive agent is VEGF.

56 (Currently Amended): The implantable prosthesis of claim ~~20~~ 1 wherein the rigid polymer is selected from the group consisting of polysulfones, polyacetals, polyethersulfones, polyarylsulfones, polyetheretherketones, polyamides, polyurethanes, polytetrafluoroethylene, other fluoronated and perfluoronated vinylpolymers, polycarbonate, polyetherimides, tyrosine-derived polyarylate

polymers, polylactic acid and polyglycolic acid-based composites and copolymers and mixtures thereof.